

# *JUNIOR* **WILDLAND FIREFIGHTER GUIDE**



**2016**

# WHAT IS IT?

The Arkansas Junior Wildland Firefighter Program was created to help Arkansas Forestry Commission officials, and other wildfire prevention professionals, teach Arkansas students about forests and wildfires, wildfire safety, prescribed fire as a forest management tool, and more about enjoying the outdoors right here in the Natural State.



## What about you?

Where is your favorite Arkansas forest? ... in your own backyard? ... at a State Park or National Park? ... near a lake where you swim? ... surrounding a trail where you hike? ... near a place you have visited on vacation?

# ARKANSAS FOREST FACTS



Our forests cover over 19 million acres of land in Arkansas.

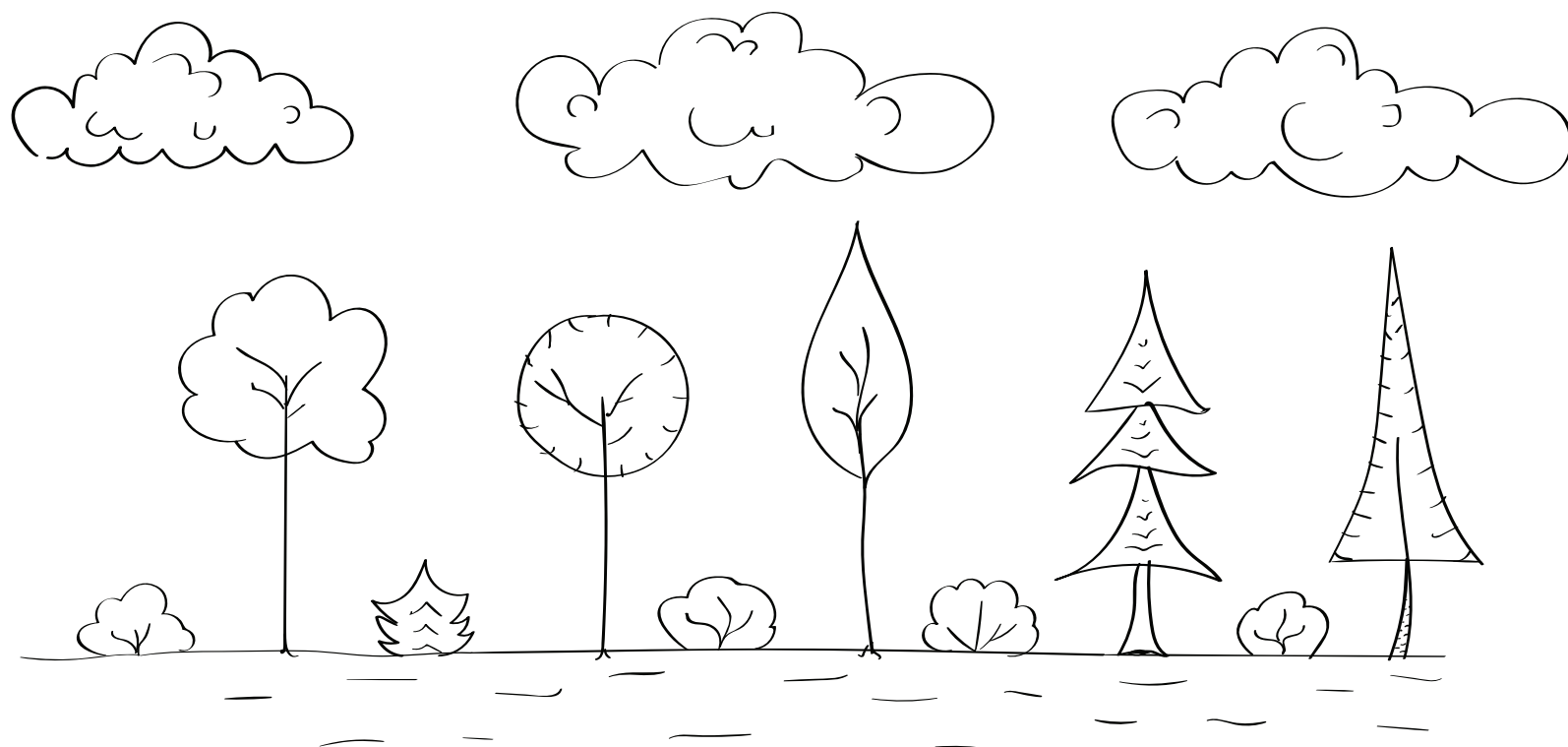
Our forests cover over 56% of our state's land area.

Our forests, and all forests, help clean the air, water, and soil.

Our forests need careful protection & management to stay healthy.

In your own words...

## Why should forests be protected?



# WHO PROTECTS & MANAGES ARKANSAS FORESTS?

The Arkansas Forestry Commission (AFC) was established in 1931 to protect and manage Arkansas forests. The AFC is a state agency within the Arkansas Agriculture Department, and has offices in almost every county. Besides stopping wildfires and managing forests for good health, AFC rangers, foresters, and other staff also offer:

- Baucum Nursery
- Poison Springs State Forest
- 24 Hour Dispatch Center
- Airport Hangar and Plane Fleet
- General Forestry Landowner Assistance
- Water Quality Advice
- Forest Health & Forest Pest Advice
- Training, Equipment and Assistance to Volunteer Fire Departments
- Wildfire Safety Education
- Forestry Law Enforcement
- Urban Forestry Programs (programs for trees planted in cities)
- Forest & Seedling Research

**How many counties are in Arkansas?** \_\_\_\_\_

For each Arkansas county, the AFC has a crew of Rangers and a Forester dedicated to the protection and management of forests in that area.

**Where is your local Arkansas Forestry Commission office located?** \_\_\_\_\_

The AFC is not the only organization that protects forests in Arkansas. Ask about the other roles that partner agencies play in protecting and managing forests and natural areas in our state. Partner agencies include the U.S. Forest Service, Arkansas State Parks, National Park Service, The Nature Conservancy, Arkansas Game & Fish Commission, U.S. Fish & Wildlife Service, Natural Resources Conservation Service, Arkansas Forestry Association, Department of Arkansas Heritage, and many other federal, state, and private agencies and organizations.

**What is the difference between the AFC and the U.S. Forest Service?** \_\_\_\_\_



## What are wildfires?

A wildfire is a \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Do wildfires only happen in the forest?

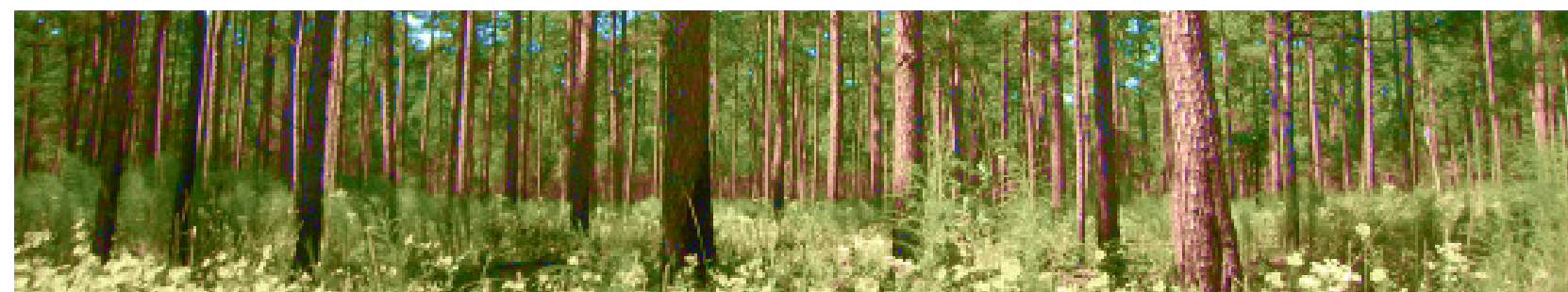
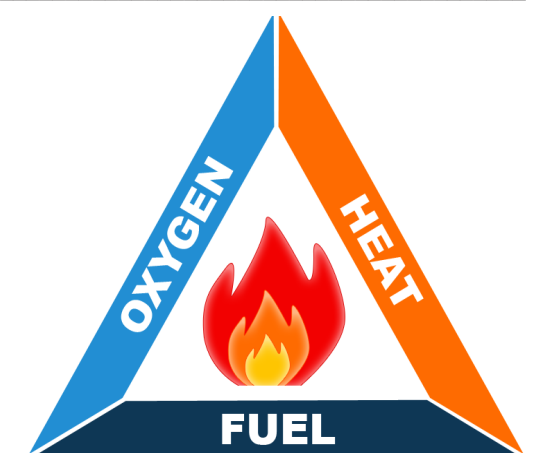
\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## What is an area called with homes and buildings mixed together closely with trees and nearby forest?

\_\_\_\_\_

## What makes a wildfire burn?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# WILDFIRE IN ARKANSAS



Because Arkansas has so many forests, wildfire is a natural threat. The Arkansas Forestry Commission and area fire departments work to educate residents about what causes wildfires, and what to do to report and stop wildfires. As communities build more houses, and expand closer to forested areas, wildfires are an increasing threat to both forested areas, and to the wildland urban interface.

What does the wildland urban interface look like? In the white space below, draw an image of homes and buildings mixed together with trees and forested area.



## When do most Arkansas wildfires take place (there are two time periods)?

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_

### What are the primary causes of Arkansas wildfires?

Arson

Debris Burning

Cigarettes

Campfires

Equipment

Children Playing with

Matches

Lightning





# HOW ARE WILDFIRES STOPPED?

**WORDS TO KNOW:**

- Dozer**
- Humidity**
- Suppression**
- Vegetation**
- Fire Break**

Wildfires are different from fires that take place in homes and buildings. They cannot be put out (or suppressed) with water alone. They don't have structural walls or concrete to contain flames.

As you've already learned, the fuel for wildfires is vegetation - which may include grass, trees, brush, leaves, or general forested area. Because vegetation may have no natural barriers, wildfire suppression must include the construction of a fire break.

Fire breaks are built ahead of the path of a wildfire. Dozers construct a fire break wide enough to keep flames from jumping to other vegetation



across the line. Dozers dig fire breaks down to mineral soil, because soil will not burn.

Wildfire behavior is heavily affected by weather factors. Humidity, or the amount of moisture present in the air, has the largest effect on how quickly a wildfire can grow. Wind can also change the direction of a wildfire in a matter of moments.

When a wildfire is burning very fast or hot, firefighters may request assistance from air tanker planes. These planes can drop 500- 800 gallons of water at once, which cool flames and help to slow the spread. While the water cools and slows the fire, dozers can more easily construct fire breaks to permanently stop the spread of flames. **Teamwork between dozer operators, air tanker pilots, and area fire departments stops wildfires.**



# ARKANSAS WILDFIRE STATS

Arkansas wildfires are stopped by the construction of fire breaks built by dozers. Fire breaks block wildfires from their fuel source, and therefore stop flames.

How many wildfires have occurred in Arkansas?

|         |                 |              |
|---------|-----------------|--------------|
| » 2015: | 1,178 wildfires | 14,652 acres |
| » 2014: | 1,240 wildfires | 16,687 acres |
| » 2013: | 787 wildfires   | 11,261 acres |
| » 2012: | 2,148 wildfires | 34,434 acres |
| » 2011: | 2,435 wildfires | 41,783 acres |
| » 2010: | 2,222 wildfires | 35,197 acres |



**How does humidity affect wildfire behavior?** \_\_\_\_\_

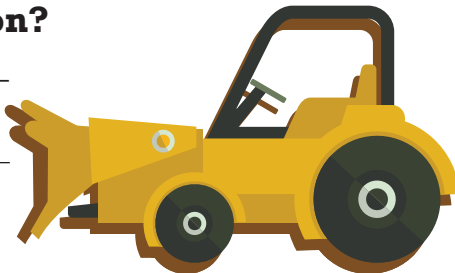
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**How do fire breaks stop wildfires?**

\_\_\_\_\_

**How do planes assist dozer crews with wildfire suppression?**

\_\_\_\_\_



# DO YOUR PART!



To do my part in preventing Arkansas wildfires, how can my family and I use outdoor burning and outdoor fire safely? Tips below can help you! Draw a picture of your family or friends using the fire safety tip in each space provided ...

**1 Fire should never be used without adults.**  
Never play with matches, lighters, fireworks, cigarettes, or open flames of any kind without adult supervision and special permission.

**2 Choose a safe burn site.**  
When your family is burning leaves, brush, trash, or enjoying a campfire - burn as far away from your home, vehicles, porch, trees, fences, and equipment as possible. Dig a circle of dirt around your fire (creating your own, small fire break), so that flames stay inside the circle, and don't go anywhere else.

**3 Check the weather before you burn.**  
When planning an outdoor burn with your family, have your parents check for safe burning conditions. Only burn when the wind is predicted to stay below 10 miles per hour, and humidity is predicted to stay above 35-40%.

**4 Don't ever leave your fire while it is still burning.**  
When burning outdoors or enjoying a campfire with your family, remember that the fire should never be left unattended. Someone should stay with the fire at all times, until all flames have been put out. It is also wise to keep a water hose nearby.

**5 Make sure your fire is put out correctly.**  
Before you leave an outdoor burn or campfire of any kind, remember to fully extinguish flames using water or dirt. Before you leave, you should make sure that all flames are out, and all embers are black. There should be no heat and nothing left to burn in your pile for it to be safe. Never leave a fire unattended while it is still burning.

**6 When an emergency happens, report fires quickly .**  
Dial 911 to report a house or building fire. Dial 1-800-468-8834 to report a wildfire to the Arkansas Forestry Commission Dispatch Center, which is open 24 hours every day.



# IS THERE SUCH THING AS A GOOD FOREST FIRE?!



It might be hard to believe, but fires can actually be a *GOOD* thing for a forest!

Prescribed fires, sometimes also called “controlled burns,” are carefully planned, closely managed fires used only by forestry professionals to accomplish many forest management goals.

Prescribed fires are slow-moving fires with small flames. Professionals make sure that they burn slowly along the forest floor, ridding the forest of a build up of pine needles, decaying limbs and trees, shrubs and vines, and competing trees that the forest doesn’t have room for. Arkansas forests are actually healthier when exposed to periodic, slow-moving, small fires like prescribed fires. A successful prescribed fire will leave minimal evidence behind; in most cases green grass and healthy vegetation grow in the area by the next season. Healthy, mature trees are not affected by the small flames of prescribed fire.

Prescribed burning can be used to accomplish the follow forest management goals:

- » added wildfire safety
- » improved habitat for wildlife
- » improved habitat for native plants
- » stronger forests that are more resistant to pests and diseases

Prescribed fires are planned during low wildfire danger conditions, which include high humidity and low wind. Remember, these weather conditions are opposite of those during periods of high wildfire activity (during conditions of low humidity and high wind). Prescribed fires always include a Burn Management Plan with detailed weather information, safety guidelines, and forest management goals to accomplish with the burn.



Forestry professionals usually begin a prescribed fire with a tool called a drip torch (pictured at left). This allows the technician to spread fire slowly, and only in carefully chosen areas.

**How is a prescribed fire different from a wildfire?**

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**Who can plan and manage a prescribed fire?**

**How do prescribed fires help “clean” the forest?**

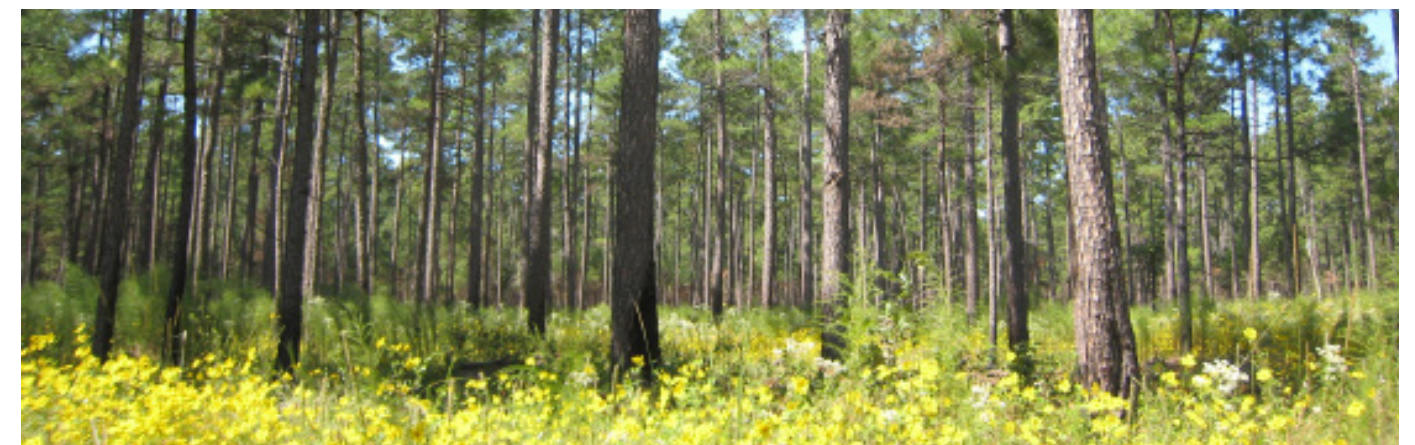
**List two benefits of using prescribed fire as a forest management tool.**

- 1) 

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- 2) 

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**Do prescribed fires permanently damage the forest?**



The forest above experienced a successful prescribed burn one season before this image was taken. Notice the open understory (forest floor), healthy trees, green grass, and wildflower varieties. This forest is healthier and more wildfire resistant than one without prescribed fire.



# Why is it important to protect & manage Arkansas Forests?

Arkansas forests are one of our state's greatest renewable resources! When our forests are healthy, our water is healthy; this includes our lakes, streams, reservoirs and drinking water. When our forests are healthy, our air is clean. When our forests are healthy, our soil is rich and fertile. When our forests are healthy, our wildlife is healthy and flourishing. When our forests are healthy, we have more places to hike, picnic, camp, hunt, relax, and enjoy.

Arkansas forests also help our economy. According to recent data, more than 26,000 jobs were tied to healthy forests and industry in Arkansas. Forests provide us with a renewable resource - trees - that we can sell, or use to build homes and businesses, or use to create a variety of wood products. Many products are built or manufactured with wood including fence posts, power line poles, pencils, furniture, paper, and more. Forest products are all around us, all the time.

What are ways that you and your family can enjoy Arkansas forests?

Circle all the things that you have done in the forest below ... then, draw a square around the things that you would like to do. When you have finished, add your own ideas for forest fun!

**Hang a Tree Swing or Hammock**

**Stargaze**

**Stack & Balance Rocks**

*Play Hide and Seek*

**PICNIC**

**Identify Animal Tracks**

**Walk your Dog**

**EXPLORE**

**Wade in a Stream**

**Create Leaf Rubbings**

*Plant Bulbs or Tree Seedlings*

**Build a Fort of Sticks & Limbs**

**Make a Trail Map**

**Collect Pine Cones**

**Make a Birdfeeder**

**HUNT**

**CAMP**

**CLIMB A TREE**

**Pick up Trash**

**HIKE**



# How can you do your part as a Junior Arkansas Wildland Firefighter?

We are PROUD of you, thank you for helping us to protect and serve Arkansas forests, and Arkansas families!

What are the two top causes of Arkansas wildfires?

1) \_\_\_\_\_

2) \_\_\_\_\_

How can you help prevent Arkansas wildfires? List two ways.

1) \_\_\_\_\_

2) \_\_\_\_\_

List three reasons why Arkansas forests are important.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

***I have completed the  
Arkansas Junior  
Wildland Firefighter Course!***

*I understand that Arkansas forests are one of our most valuable resources and why they are so important to protect.*

*I understand what causes Arkansas wildfires and can help to prevent wildfires in the future.*

Name: \_\_\_\_\_

Date: \_\_\_\_\_



ARKANSAS  
AGRICULTURE  
DEPARTMENT



**[forestry.arkansas.gov](http://forestry.arkansas.gov)**  
**REPORT WILDFIRES: 1-800-468-8834**